

**AREA COMMAND EXECUTIVE SUMMARY / SITUATION REPORT  
AREA COMMAND (U.S. EPA REGIONS 8, 6 AND 9)  
GOLD KING MINE RELEASE INCIDENT  
U.S. ENVIRONMENTAL PROTECTION AGENCY**



Gold King Mine preparation of diversion to Red and Bonita ponds

**Subject:** EXECSUM / SITREP #14  
Gold King Mine Release Incident  
San Juan County, Colorado  
Latitude: 37.8945 Longitude: -107.6384

**From:** Area Command Situation Unit

**Date:** 08/25/2015

**Reporting Period:** 0700 08/24/2015 through 0700 08/25/2015

**Website:** [www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine)



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**For Internal Use Only**

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**EXECUTIVE SUMMARY**

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***Situation Summary***

United States Environmental Protection Agency (U.S. EPA) Area Command (AC), comprised of U.S. EPA Regions 8, 6 and 9, is continuing strategic management of the response Unified Incident Command Posts (ICPs).

***Highlights, Key Updates/Changes***

- ☐ AC Environmental Unit (EU) continues to develop, in conjunction with U.S. EPA Headquarters, trend information for analytical results characterizing the waterways at times before and during the response.
- ☐ AC continues to develop a strategy for transitioning to long-term assessment.
- ☐ AC continues to monitor relations with the Navajo Nation, including security during resumed operations within the Navajo Nation.
- ☐ The Joint Information Center (JIC) will transition to an off-site virtual operation starting on August 26, 2015.

***Area Command Emphasis***

For the next operational period, the AC command emphasis will be:

- ☐ Positive and professional communications with stakeholders and response personnel.
- ☐ Safety and well-being of citizens and response personnel.
- ☐ Accelerate posting of analytical data with an optimized data processing process.
- ☐ Develop a global message that supports transition to long-term assessment.
- ☐ Coordinate response between Regions 8, 6 and 9; and transition to long-term assessment.

The metrics provided in this Situation Report represent quantities reported for work completed on August 24, 2015. Metrics highlighted in yellow represent a change from the previous day's Situation Report. Press releases are presented in Attachment 1. Attachment 2 includes situation reports from Regions 8, 6 and 9.



## 1.0 OPERATIONS

### 1.1 Sampling Operations

Operations sampling activities are summarized below. Sample quantities are based on the SCRIBE database, and include field samples and quality assurance/quality control (QA/QC) samples. The quantities shown below may vary from the quantities shown in Attachment 2 because the database is dynamic and changes continuously as samples are collected and recorded. In addition, time that the samples are recorded and entered into the database within the operational period and preparation of the various situation reports also introduces a variable that affects the quantities reported at a given time.

Matrix	U.S. EPA Region	Qty. (8/24/2015)	Qty. (Cumulative)
Private Drinking Water Well Samples	8	3	326
	6	4	303
Surface Water Samples	8	8	230
	6	9	183
	9	8	162
Sediment Samples	8	1	51
	6	9	201
	9	5	132

There has not been sampling of private drinking water wells in U.S. EPA Region 9.

### 1.2 Water Distribution and Transportation Branch

AC continues to monitor potable water, agricultural water and agricultural food deliveries. U.S. EPA purchased 1,120 cases of bottled water to supply the community. Public support activities completed are summarized below.

Activity	U.S. EPA Region	8/24/2015			Cumulative		
		Deliveries (each)	Qty. (gal)	Qty. (hay bales)	Deliveries (each)	Qty. (gal)	Qty. (hay bales)
Potable Water Deliveries	8	2	28,400		30	552,000	
Livestock / Agricultural Water Deliveries	8	0	0		47	141,980	
	6				59	1,104,990	
	9	0	0		13	218,400	
Agricultural Food Deliveries	6				1		244
	9	3		1,152	9		3,556

The Navajo Tribal Utility Authority is handling water deliveries in Region 9. The Region 6 agriculture and livestock team demobilized on August 20, 2015. There have not been: a) potable water deliveries by the U.S. EPA in Regions 6 and 9; and agricultural food deliveries by U.S. EPA in Region 8.

### 1.3 Community Engagements

Community engagements reported are summarized below.



Table 3 - Community Engagement Summary		
Description	U.S. EPA Region	Qty. (8/24/2015)
Community Engagements	8	0
	6	0
	9	0

#### 1.4 Anticipated Events: VIPs/Congressional Visits and Public Events

Upcoming anticipated site visits and public events are summarized below.

Table 4 - Anticipated Site Visits and Public Events Summary		
U.S. EPA Region	Planned Event	Anticipated Date
Area Command	Board of LaPlata County Commissioners response update	8/26/2015
	Silverton/San Juan County community meeting	8/27/2015
	Meeting to consider possible formation of Coalition of Animas River Spill Partners	8/31/2015
	Southern Ute Tribal Leaders visit Gold King Mine site	9/2/2015
6	None scheduled.	N/A
8	15 High school students to visit	8/27/2015
9	None scheduled	N/A

#### 1.5 Community Relations Branch

Calls received from the U.S. EPA public information numbers is summarized below.

Table 5 - Calls Received			
Call Number	U.S. EPA Region	8/24/2015 Calls (each)	Cumulative (each)
EPA National Call Number (844-607-9700)	8	7	108
	6	2	64
	9	2	33
	<b>Subtotal</b>	<b>11</b>	<b>205</b>
Regional Call Center (970-385-8700)	8	11	803

## 2.0 DRINKING WATER SYSTEM IMPACTS

No known water systems are currently affected by the release or response operations.

## 3.0 FINANCE

### 3.1 Estimated Response Costs to Date

The table below summarizes estimated costs for the response.



Table 6 - Estimated Response Costs Reported as of August 24, 2015					
Region	U.S. EPA Cumulative Expended Payroll	U.S. EPA Cumulative Expended Travel	U.S. EPA Cumulative Other Charges	Cumulative U.S. EPA Contractors Cost	Total Cumulative Costs
8	\$834,307	\$91,153	\$11,753	\$1,480,565	\$2,417,778
6	\$353,640	\$90,150	\$78,855	\$1,897,882	\$2,420,527
9	\$401,760	\$63,000	\$0	\$505,218	\$969,978
<b>TOTAL</b>	<b>\$1,589,707</b>	<b>\$244,303</b>	<b>\$90,608</b>	<b>\$3,883,665</b>	<b>\$5,808,283</b>

### 3.2 Estimated Burn Rates

The table below summarizes current estimated burn rates for the response.

Table 7 - Estimated Daily Burn Rates	
U.S. EPA Region	Estimated Daily Burn Rate (as of 8/24/2015)
8	\$185,983
6	\$186,195
9	\$74,614
<b>Total</b>	<b>\$446,792</b>

## 4.0 PARTICIPATING ENTITIES

Federal, regional, local and other entities participating in the response are summarized below.

### 4.1 Region 8

U.S. EPA  
U.S. Fish and Wildlife Service (USFWS)  
U.S. Coast Guard (USCG)  
U.S. Bureau of Reclamation (USBOR)  
Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. EPA Environmental Response Team (ERT)  
Colorado Office of Emergency Management  
Southern Ute Indian Tribe (SUIT)  
Ute Mountain Ute Tribe  
La Plata County  
San Juan County  
Colorado Department of Public Health and Environment (CDPHE)  
Southwest IMT  
City of Durango  
Durango Fire Department  
San Juan County Health Department

### 4.2 Region 6

U.S. EPA  
USFWS  
New Mexico Environment Department (NMED)  
ATSDR  
New Mexico (NM) Department of Health  
NM Office of the State Engineer



NM Department of Game and Fish  
County of San Juan – New Mexico

#### 4.3 Region 9

U.S. EPA  
USCG  
Navajo Nation  
State of Colorado  
State of New Mexico  
State of Utah  
State of Arizona

#### 5.0 PERSONNEL ON-SITE

The table below summarizes staffing numbers for the federal entities and agencies active in the response.

Table 8 - Personnel On-Site		
Region	Agency / Entity	Number of Personnel (8/24/2015)
Area Command	U.S. EPA	20
	U.S. EPA Contractors	3
	USCG	3
8	U.S. EPA	4
	U.S. EPA Contractors	41
	USCG	4
	Other Federal, State, Local and Tribal Entities	68
6	U.S. EPA	14
	U.S. EPA Contractors	16
	USCG	0
	Other Federal, State, Local and Tribal Entities	0
9	U.S. EPA	5
	U.S. EPA Contractors	16
	USCG	4
	Other Federal, State, Local and Tribal Entities	3
Total		201

#### 6.0 CRITICAL INCIDENT STRESS MANAGEMENT (CISM)

AC has implemented a CISM program for personnel involved with the response. On August 24, 2015, the CISM center received 5 visits from response personnel. To date, the CISM center has received 138 visits.

#### 7.0 SOURCE OF ADDITIONAL INFORMATION

For additional information, refer to [www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine).



Exec. Sum/SITREP #14 (8/25/2015)  
Gold King Mine Release Incident  
Area Command

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**ATTACHMENT 1  
PRESS RELEASE(S)  
- - NONE THIS PERIOD - -**



Exec. Sum/SITREP #14 (8/25/2015)  
Gold King Mine Release Incident  
Area Command

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**ATTACHMENT 2  
REGIONAL SITUATION REPORTS**



U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
2015 Gold King Mine Release SITREP

EPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 8

Subject: Situation Report #16  
Gold King Mine Release  
San Juan County, CO  
Latitude: 37.8945 Longitude: -107.6384  
From: Colorado Unified Command (Situation Unit)  
Date: 08/25/2015  
Reporting Period: 08/24/2015  
Website: <http://www2.epa.gov/goldkingmine>

New information included in the SITREP is in bold text.

## **Executive Summary**

On 8/5/2015, while investigating the Gold King Mine in Colorado, an EPA cleanup team working at the mine triggered a release of mine wastewater into Cement Creek which feeds into the Animas River. The release resulted in coloring the Animas River a mustard-orange as the pulse of the release moved downstream. The leading edge of the release passed through Durango, Colorado, on Friday, 8/7/2015, and on 8/8/2015, it crossed the border into New Mexico where it eventually discharged into the San Juan River. As the leading edge of the release moved further down the Animas River into the San Juan River it became indistinguishable.

A Unified Command (UC) located in Durango, Colorado was established and continues to assess and mitigate contamination resulting from the release. The UC includes EPA Region 8, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, and La Plata County. San Juan Basin Health Department, San Juan County and the Ute Mountain Ute Tribe are providing Administrators to the UC. The City of Durango and the Colorado Department of Public Health and the Environment (CDPHE) are coordinating agencies.

EPA continues to take daily surface water samples from the Animas River and Cement Creek. Animas River sediment sampling has occurred. CDPHE has sampled raw and finished public drinking water supply systems. Upon request, the EPA has also been sampling private drinking water wells. The results of the sampling analysis are being distributed as appropriate. The EPA has also completed irrigation ditch assessment and ditches were flushed and monitored prior to opening for irrigation use.

The Animas River reopened to recreational use mid-day Friday 8/14/2015 after being closed to all watercraft since 8/6/2015. The City of Durango's drinking water intake was not in use at the time of the event and remained off line until Friday, 8/14/2015. Currently all irrigation ditches are open and available for irrigation use.

An EPA Area Command (AC) is also located in Durango, Colorado and coordinates EPA's response between the EPA Regions 6, 8, and 9.

Active disaster declarations remain in effect for **State of Colorado, San Juan County, Town of**

## **Introduction**

### **1.0 Background**

Site Number: A8K9RV	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority: CERCLA	Response Type: Emergency
Response Lead: EPA	Incident Category:
NPL Status: not listed	Operable Unit:
Mobilization Date: 08/05/2015	Start Date: 08/05/15
Demob Date: TBD	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification: 08/05/15

### **2.0 Site Description**

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine discharged acidic mine drainage that is a contributor of heavy metals into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

### **3.0 Description of Threat**

Mine waste water was released into Cement Creek and the Animas River as a result of the blowout on 8/5/2015. The volume of the release based on US Geological Survey (USGS) Cement Creek gauging station was estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah.

### **4.0 Critical Resource Needs**

All resources are being tracked by the Resources Unit. Resources for the response continue to be ordered as needed to fill critical resource needs.

### **5.0 Incident Objectives**

- Ensure health and safety of the public and response management personnel.
- Identify criteria for lifting current health advisory.
- Continue implementation of the private well sampling plan.
- Facilitate transition to medium term sediment and river monitoring plan.
- Continue coordination with State, Federal, Tribal and local Stakeholders and neighboring jurisdictions.
- Continue management of adit discharge and discharge management plan.
- Ensure continued access to mine site within constraints of on-going road work.

- Continue mine dump stabilization.
- Implement Emergency Alert plan and continue development of long term alert, monitoring and warning system.
- Coordinate data sharing with local stakeholders.
- Continue monitoring, sampling and documentation of mine activities and mine ops.
- Coordinate ditch flushing and mitigation activities as necessary.

## Current Activities

### 6.0 Environmental Branch

#### 6.1 Assessment and Mitigation Group

Performed daily monitoring at Little Fishes LLC - elevated pH readings. Upon consultation with the owner determination was made for ER to clear all of the intakes and utilized a river pump to increase water flow to the ponds.

EPA met with resident in the Riverbend District regarding an area of trapped sediment near the irrigation inlet. START collected 1 sediment and 2 surface water samples. The Branch OSC discussed options for mitigation.

Branch OSC was contacted by a resident in La Plata County regarding unexplained sudden demise of fish in his property ponds. EPA assessed the area and noted that the ponds were well maintained. EPA will sample several ponds on the property Tuesday, 8/25/2015.

4 hazard assessments are scheduled for 8/26/2015.

#### 6.2 Surface and Private Well Water Sampling and Sediment Sampling

The EPA is regularly sampling seven surface water locations as follows:

Cement Creek – 1

Animas River upstream of confluence with Cement Creek – 1

Animas River downstream of confluence with Cement Creek – 1

Animas River through Durango – 4

6.3 The EPA samples collected on 8/24/2015 are provided in the following table:

Matrix	Number of Samples *	Total Samples Collected
Potable Water	3	326
Sediment	1	51
Surface Water	10	230

\*Quality Assurance samples are included in these numbers.

The EPA is conducting private well water sampling as needed and calling those residents sampled to provide the analytical results. It is unclear if the exceedances reported in the table below were caused by the mine release. Follow up work at the wells that exceed drinking water standards include: flushing the well; resampling at the well; and taking an additional tap water sample for analysis. A medium term well sampling plan is currently in development.

Maps have been made for 112 wells covered by Residential North Strike Team.

- Out of 112 wells, 66 have phone numbers and have been put on a call list.
- Out of the 66 with numbers, 25 have been called by the North team.
- Out of the 25 that have been called, 5 messages have been left, 3 appointments have been made, and the rest are wrong numbers or multiple wells on one property.

The following table provides the private well information up to 8/24/2015.

Quantity	Daily	Totals
Private well samples requested*	0	343
Private wells sampled (does not include QA samples)	3	310
Private wells with primary drinking water exceedances**	3	15
Remaining private wells to be sampled*		38

\*The well requests and remaining lists are constantly refined as both duplicate requesters and requestors determined to be on city water are removed from the list.

\*\* These numbers include re-sampled locations as two instances of MCL exceedance.

#### 6.4 Call Center

Call center totals are provided in the following table:

Topic	8/24/2015	To Date Total
Well Water Test Scheduling	3	372
Water Concerns	5	120
Health Concerns	0	33
Recreation	0	21
Ecological Concerns	0	19
Livestock/Irrigation	0	19
Tourism/Media	3	68
Volunteer Offers	0	24
General Concerns	0	127
Daily Totals:	11	803

## **6.5 Water Distribution**

On 8/24/15 potable water deliveries were made to two locations for a total of **28,400 gallons**.

## **7.0 Colorado Department of Public Health and Environment**

No report.

## **8.0 Mine Division Response Actions**

The EPA continues to operate and work on optimizing treatment and sedimentation ponds at the mine site that are treating water by adjusting pH and removing dissolved metals.

### **8.1 Water Treatment Plant**

- Caustic and flocculent addition on going.
- Pumping from Gold King Mine treatment pond 1 to Red and Bonita pond 3.
- Preparation continued to divert flow to R&B ponds.
  - Diversion piping and equipment arrived.
  - A 40 yard dumpster was delivered and put in position for the diverting of water flow.
- Added cement to solidify slurry in R&B pond 4.
- Lime addition process in development.

### **8.2 Water Quality Sampling**

- Water quality parameters collected at 11 locations three times daily.
- Flow Rate of 536 GPM was recorded at 0830 from the Gold King Mine adit portal.
- Flow rate of 552 GPM was recorded at 1545 from the Gold King Mine adit portal.
- USCG personnel to monitor the PH and NTU's at 4 different locations every 2 hours to monitor water treatment change.

### **8.3 Sediment Recovery**

- Omni removed sediment from the ponds into filter bags.
- Centrifuge technician arrived to troubleshoot equipment.
- Develop plan for sediment repository.

### **8.4 Gold King Mine**

- Road stability improvements with the Gabion baskets still going on.
- Access to GKM will be restricted due to road excavation and basket installation.

### **8.5 Mine Logistics**

- Determine appropriate shelter for lime addition area.
- Submitted request for three USCG personnel, two as backfills.

### **8.6 Site Visits**

- 5 local and county officials visited the site on 8/24/2015.

## **Anticipated Activities**

### **9.0 Durango Area Anticipated Activities**

No Report.

### **10.0 Mine Division Anticipated Activities**

- 20' x 30' tent to be delivered 25 AUG 2015 for site
- San Miguel Power to remove damaged power lines 26 AUG 2015.
- Additional rerouting options engineering solutions for diversion to R&B and down to Gladstone in development.
- Survey to be conducted for Gold King Mine waste dump.
- Automated lime treatment system in development.
- Examining the option of creating a lime slurry with a PH of 7.5 and stopping the addition of the caustic solution and Brenn-FLOC.

### **11.0 Site Visits**

- Senator Burgess visit 8/25/2015.
- 15 high school students to visit 8/27/2015 from 1100-1230.

### **12.0 Other activities occurring in the area that are not directly associated with the response:**

- Bureau of Land Management (BLM) is conducting a survey of roads near the mine site.
- San Miguel Power will remove damaged power lines on 8/26/2015 and permission was given to remove poles at the Gold King Mine portal.

## **Command and General Staff**

### **13.0 Logistics Section**

On Monday, 8/24/2015 the UC ICP moved from the facility at the La Plata County Fairgrounds to 135 Burnett Dr., Durango, CO.

### **14.0 Finance Section**

The EPA Region 8 total cost as of the end of 8/23/2015 is \$2,288,390.00. The current burn rate (\$/day) is \$176,030.00

### **15.0 Safety Officer**

Use additional caution in the parking lot of the ICP and driving on Burdette Dr. because of the continued construction activities. Reminder that there is additional parking around the bend from the ICP, use caution when walking through the construction activities.

When in the field continue to use the buddy system. Watch out for each other and continue to stay hydrated.

Injury/Accident: 1 total to date.

The Emergency Response Peer Support team offers trained peer staff with whom you can talk to on a private basis, either in person or over the phone, when you feel stressed. Come and relax at the CISM Rest House. You can use the Rest House to take a nap, have snacks, meditate or just chat.

You can contact your CISM team members at any time (24/7):

Wendy Adams (R-10): 425 466-6532

Tony Honnellio (R-1): 617 947-4414

CISM House had **four visitors on 8/24/2015**.

#### **16.0 Liaison Officer**

No report.

#### **17.0 Information Officer**

Social Media Sites being maintained by the UC JIC:

Blog – [goldkingminerelease.blogspot.com](http://goldkingminerelease.blogspot.com)

FB – [facebook.com/goldkingminerelease](https://facebook.com/goldkingminerelease)

Twitter - @GKMRelease, @SilvertonCO1, @VisitSilverton

YouTube Channel – Gold King Mine Release

As of 8/25/2015:

Blog ([goldkingminerelease.blogspot.com](http://goldkingminerelease.blogspot.com)) – **2,510 page views (130 yesterday)**, 0 comments

Facebook ([facebook.com/goldkingminerelease](https://facebook.com/goldkingminerelease)) - **41 likes, 47 shares, 0 comments, total reach 474**

Twitter (@GKMRelease) - **51 tweets, 29 followers**

#### **18.0 Weather Forecast:**

##### **18.1 DURANGO AREA**

- **Tonight 8/25/2015**
  - Scattered showers and thunderstorms. Mostly cloudy, with a low around 56. East wind 5 to 10 mph. Chance of precipitation is 40%.
- **Wednesday 8/26/2015**
  - Scattered showers and thunderstorms. Cloudy, with a high near 78. East northeast wind around 5 mph becoming south southeast in the afternoon. Chance of precipitation is 50%.
- **Wednesday Night 8/26/2015**
  - A 50 percent chance of showers and thunderstorms. Mostly cloudy, with a low around 54. East southeast wind 5 to 10 mph becoming north northeast after midnight.

##### **18.2 SILVERTON AREA**

- **Tonight 8/25/2015**



- Scattered showers and thunderstorms. Cloudy, with a low around 43. South wind 5 to 10 mph. Chance of precipitation is 40%.
- **Wednesday 8/26/2015**
  - Scattered showers and thunderstorms, mainly after 8am. Cloudy, with a high near 63. South wind 5 to 10 mph. Chance of precipitation is 50%.
- **Wednesday Night 8/26/2015**
  - Showers and thunderstorms likely, mainly before 10pm. Cloudy, with a low around 41. South wind 5 to 10 mph. Chance of precipitation is 60%.

## 19.0 Participating Entities

### 19.1 EPA Area Command

The AC includes EPA Regions 6, 8 and 9. The EPA Region 8 includes Colorado. The EPA Region 6 is working closely with the New Mexico Environment Department (NMED) and the EPA Region 9 is working with the Navajo Nation. The AC is completing daily Executive Summary updates on AC operational activities.

### 19.2 Unified Command and Cooperating Agencies

The Southern Ute Indian Tribe has discontinued Animas River water sampling. As a proactive measure, the SUIT is continuing installing reverse osmosis on tribal residential kitchen taps. If individual drinking well sampling results show any concerns, additional actions will be taken.

US Bureau of Reclamation (USBR) Technical Service Center continues to provide technical assistance for the EPA road stabilization efforts in and around the mine site.

### 19.3 Total Personnel in the Field

Gold King Mine Release 2015	
	08/24/2015
Group	Number
EPA @ REOC	(12 on call)
Contractors @ REOC	2
EPA in Field	3
EPA Contractors in Field	39
EPA Laboratory	0
Contractors Laboratory	1
USCG	4
ERT	1
<b>Subtotal EPA Region 8 Resources</b>	<b>50 (+12 on call)</b>

**19.4 Personnel working at the Colorado Unified Command Post on 08/24/15**

(Does not include Area Command Personnel):

Position / Section	Number of Personnel
Unified Command	6
PIO	13
Safety	2
Operations	2
Planning (incl SITL, ENVL & RESL)	4
Logistics	1
Finance	2
Liaisons	1
Agency Representatives/Administrators	2
Total	33

**19.5 Organizations with individuals deployed to the response under the UC include:**

- Colorado OEM
- Southern Ute Tribe
- La Plata County
- San Juan County
- Colorado Department of Public Health and Environment
- State of Colorado resources: Southwest IMT, Northwest IMT, Boulder IMT, Jeffco IMT
- City of Durango
- San Juan Basin Health Dept.
- US Bureau of Reclamation
- US Bureau of Indian Affairs

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Gold King Mine Spill - Region 6**



**Sample Preparation**

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region VI**

**Subject: POLREP #18  
Gold King Mine Spill - Region 6**

**Various New Mexico locations, NM  
Latitude: 36.8374600 Longitude: -107.9916800**

**From: Ronnie Crossland, Region 6 Regional Incident Commander (RIC)**

**Date: 8/25/2015**

**Reporting Period: 8/24/2015 0700 – 8/24/2015 1900**

## **1. Introduction**

### **1.1 Description of Threat**

Region 8 reported approximately three million gallons of mine waste water was released into Cement Creek and the Animas River. The primary environmental concern is the pulse of contaminated water containing sediment and metals flowing as an orange-colored discharge downstream through Durango, Colorado, and into New Mexico and Utah.

### **1.2 Preliminary Removal Assessment/Removal Site Inspection Results**

Water monitoring and sampling is ongoing at public water supply intakes and private wells and field pH levels and other water quality parameters are being monitored.

## **2. Current Activities**

Headquarters has established a joint website at [www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine).

Created a new general public call-in number for Regions 6, 8, and 9: (844) 607-9700.

### **2.1 Operations Section**

EPA continues to discuss the short and long term criteria with NMED, as proposed in their submission.

Morningstar Update: Farmington began the surveying process for increasing the feed lines. This will allow the pump to operate for an extended period of time without pumping its feed tanks dry. Construction is estimated to take 1 to 2 days.

Lower Valley Water System requested sampling on their finished water for August 28 and 31, 2015. EPA is working with the water system to schedule the sampling.

EPA attended the NMED led Water Fair on August 24, 2015 and will attend on August 25.

EPA has sent NMED validated data for the following:

- ☐ Surface Water Sampling Analytical Data from August 6-14, 2015
- ☐ Surface Water Monitoring Data from August 6-14, 2015
- ☐ Intake Sediment Sampling Analytical Data from August 10-14, 2015
- ☐ Irrigation Ditch Sediment Sampling Analytical Data from August 13-14, 2015
- ☐ Private Well Data from August 10-14, 2015 and August 19, 2015

### **Data Posted to the Web**

The following data was sent to HQ to post:

- ☐ Drinking Water Intake Surface Water Data from August 15-18

### **Community Meeting/VIP**

No Community Meetings or VIP visits are scheduled.

### Toll-Free Number Activity

The EPA number is now immediately connecting to the Headquarters number.

	8/24/15	Total to Date
<b>Total Calls Received</b>	11	190
<b>Calls Concerning R6</b>	2	64
<b>Calls Returned by R6</b>	0	64

The table below is a breakdown of the calls pertaining to Region 6. Of the twenty Well Water Test Scheduling calls, seven of the citizens expressed gratitude for EPA's efforts in sampling.

TOPIC	DATE: 08/24/2015	OVERALL TOTALS
<b>Well Water Test Scheduling</b>	1	20
<b>Water Concerns</b>	0	8
<b>Health Concerns</b>	0	4
<b>Livestock/Irrigation</b>	0	4
<b>Tourism/Media</b>	0	1
<b>Volunteer Offers</b>	0	3
<b>General Concerns</b>	1	18
<b>Contractor/Vendor Support</b>	0	6
<b>Daily Totals:</b>	2	64

### Private Drinking Water Well Sampling

Matrix	US EPA Region	Qty. (8/24/2015)	Qty. (Cumulative)
<b>Private Drinking Water Wells Resampled</b>	6	3	97
<b>Private Drinking Water Wells Initial Sample Effort</b>	6	0	114

EPA is coordinating with NMED on the draft private water well sample letter.

### Drinking Water Technical Support/Pretreatment/Connections

Farmington and Morningstar are working on fixing issues with tank feed lines. Farmington has agreed to connect Morningstar to a new line on Tuesday, August 25, 2015.

### Surface Water and Sediment Sampling

Matrix	U.S. EPA Region	Qty. (8/24/2015)	Qty. (Cumulative)
<b>Surface Water Samples</b>	6	9	159
<b>Sediment Samples</b>	6	9	136

### Irrigation Ditch Sampling

The irrigation ditch sampling effort has been completed. A total of 59 irrigation ditch samples were collected.

### Agriculture and Livestock Water

The agriculture and livestock team demobilized on August 20, 2015.

	<b>Total to Date</b>
<b>Farmers Served</b>	28
<b>Gallons to Farmers</b>	1,068,270
<b>Livestock Farms Served</b>	31
<b>Gallons to Livestock Farms</b>	36,720
<b>Hay/Alfalfa Pickup</b>	244 bales

## **2.2 Finance Section**

<b>Daily Cost Estimates Report</b>						
<b>Region</b>	<b>U.S. EPA Cumulative Expended Payroll</b>	<b>U.S. EPA Cumulative Expended Travel</b>	<b>U.S. EPA Cumulative Other Charges</b>	<b>Cumulative U.S. EPA Contractors Cost</b>	<b>Total Cumulative Costs</b>	<b>Estimated Daily Burn Rate</b>
6	\$328,260.00	\$92,650.00	\$12,989.44	\$1,897,882.07	\$2,331,781.51	\$91,680.00

## **3. Participating Entities in Region 6**

US EPA  
USFWS  
NMED  
ATSDR  
NM Department of Health  
NM Office of the State Engineer NM  
Department of Game and Fish  
County of San Juan – New Mexico

## **4. Personnel**

<b>Group</b>	<b>Number</b>
<b>Region 6 EPA @ REOC</b>	12
<b>Region 6 Contractors @ REOC</b>	5
<b>Region 6 Staff in JIC – Durango,CO</b>	3
<b>Region 6 Staff in Area Command – Durango,CO</b>	3
<b>Region 6 EPA OSC</b>	2
<b>Region 6/7 Water Technicians</b>	2
<b>Region 6 EPA Contractors in Field</b>	10

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
San Juan River Response - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IX

**Subject:** POLREP #12  
San Juan River Response  
Shiprock, NM  
Latitude: 36.8704828 Longitude: -108.7892506

**To:** Calanog Steve, EPA

**From:** Kathleen Dillon, Situation Unit Leader

**Date:** 8/25/2015

**Reporting Period:**

**1. Introduction**

**1.1 Background**

<b>Site Number:</b>	<b>Contract Number:</b>
<b>D.O. Number:</b>	<b>Action Memo Date:</b>
<b>Response Authority:</b>	<b>Response Type:</b>
<b>Response Lead:</b>	<b>Incident Category:</b>
<b>NPL Status:</b>	<b>Operable Unit:</b>
<b>Mobilization Date:</b>	<b>Start Date:</b>
<b>Demob Date:</b>	<b>Completion Date:</b>
<b>CERCLIS ID:</b>	<b>RCRIS ID:</b>
<b>ERNS No.:</b>	<b>State Notification:</b>
<b>FPN#:</b>	<b>Reimbursable Account #:</b>

**1.1.1 Incident Category**

**1.1.2 Site Description**

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

EPA Region 9 is focused on a stretch of the San Juan River extending from Farmington, NM to Mexican Hat, UT.

**1.1.2.1 Location**

San Juan County, NM and Navajo Reservation. The Animas River flows into the San Juan River at Farmington, NM. After the Animas River meets the San Juan River, the San Juan River continues to flow west through parts of New Mexico, Colorado, and Utah.

**1.1.2.2 Description of Threat**

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gauging station is estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah. The river is also used for recreational purposes,

including fishing and rafting, and is an important cultural resource for the Navajo Nation.

The leading edge of the release reached the New Mexico border on August 8, 2015 where it eventually discharged into the San Juan River.

### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream. There is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

EPA Region 9 is collecting and assessing water quality from the San Juan River from La Plata Highway in New Mexico to Mexican Hat in Utah. Water sampling is occurring, and pH levels and dissolved concentrations of metals are being monitored.

## 1.2 Incident Objectives

### 1. Safety

- Provide safe working environment for all response personnel
- Identify safety issues and monitor adherence to Health and Safety Plan
- Maximize protection of public health and welfare

### 2. Sampling

- Conduct water and sediment sampling from 11 designated locations along the San Juan River
- Conduct sampling from Lake Powell at 11 identified sites
- Synchronize sampling data and information with Area Command

### 3. Water and Agricultural Needs

- Procure water trucks and establish watering points
- Establish needs and delivery of water and feed for livestock

### 4. Public Outreach

- Coordinate public forum at which Navajo tribal leaders and community members can address Incident Command representatives.
- Set up a public meeting with members of the Navajo Nation.
- Communicate EPA's position and understanding of issues associated with the San Juan River and respond to public inquiries.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

Sampling along the San Juan River will continue today. The Community Outreach branch has demobilized. One START contractor is on scene at Lake Powell gathering samples.

#### 2.1.2 Response Actions to Date

#### Sampling Branch

EPA Region 9 initiated water and sediment sampling efforts on August 9, 2015, to assess the impacts of the release at the Gold King Mine on the San Juan River. Starting on August 9, samples were gathered from the shoreline of the following 11 designated locations along the San Juan River:

#### New Mexico

San Juan River at LaPlata Highway (SJLP)  
PNM Intake (SJFP)  
San Juan River at Hogback (SJHB)  
San Juan River at Shiprock (SJSR)  
San Juan DS from Shiprock (SJDS)  
San Juan River at Four Corners (SJ4C)

#### Utah

San Juan River at McElmo Creek (SJME)  
San Juan at Montezuma Creek (SJMC)  
San Juan River at Bluff Bridge (SJBB)  
San Juan River at Mexican Hat (SJMh)  
McElmo Creek Tributary (MECT)

Sample totals are summarized below:

	U.S. EPA	Qty.	Qty.
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	Region	(8/24/2015)	(Cumulative)
Private Drinking Water Well Samples	9	0	0
Surface Water Samples	9	12	147
Sediment Samples	9	12	129

August 8 - 4 water samples (SJLP, SJFP, SJHB & SJSR)  
 August 9 - 13 water samples (all sites)  
 August 10 - 12 water samples, 11 sediment samples (all sites)  
 August 11 - 13 water samples, 13 sediment samples (all sites)  
 August 12 - 13 water samples, 13 sediment samples (all sites)  
 August 13 - 12 water samples, 12 sediment samples (all sites)  
 August 14 - 12 water samples, 12 sediment samples (all sites)  
 August 15 - 12 water samples, 12 sediment samples (all sites)  
 August 16 - 12 water samples, 12 sediment samples (all sites)  
 August 17 - 12 water samples, 12 sediment samples (all sites)  
 August 18 - 10 water samples, 10 sediment samples (did not sample at SJSR or SJDS)  
 August 19 - 10 water samples, 10 sediment samples (did not sample at SJSR or SJDS)  
 August 20 - no samples collected  
 August 21 - no samples collected  
 August 22 - no samples collected  
 August 23 - no samples collected  
 August 24 - 12 water samples, 12 sediment samples

There have been no requests for well samples and no requests for samples from diversion channels.

#### **Community Relations Branch**

Incident Commander made final call yesterday to demobilize Community Relations branch. All community involvement duties are suspended under the current order.

#### **Water and Feed Delivery Branch**

A summary of water and livestock feed deliveries are as follow:

Activity	U.S. EPA Region	8/24/2015			Cumulative		
		Deliveries (each)	Qty. (gal)	Qty. (hay bales)	Deliveries (each)	Qty. (gal)	Qty. (hay bales)
Potable Water Deliveries	9	0	0	0	0	0	0
Livestock / Agricultural Water Deliveries	9	0	0	0	13	218,400	0
Agricultural Food Deliveries	9	3	0	1152	9	0	3556

Feed delivered for livestock is as follows:

8/14 - 384 bales of alfalfa delivered to Gaadiiahi chapter  
 8/21 - 384 bales delivered to Gaadiiahi, 384 bales delivered to Nenahnezad, 384 bales delivered to Hogback, 384 bales delivered to Upper Fruitland  
 8/22 - 384 bales delivered to Beclibito  
 8/24 - 384 bales delivered to Shiprock, 384 bales delivered to Red Mesa, 384 bales delivered to Aneth

#### **Drinking Water System Impacts**

No known water systems in Region 9 have been impacted.

#### **Glen Canyon, Arizona ICP**

A total of 16 water samples and 9 sediment samples were collected prior to the demobilizaion of the OSC and Liaison Officer.

One START contractor is the only representative to remain on scene in the Lake Powell vicinity. He has been integrated into a USGS/NPS expedition that is expected to conclude on Sunday. His sampling efforts throughout this expedition are detailed below. Note that these figures do NOT include the previously mentioned 16 water and 9 sediment samples .

	U.S. EPA	Qty.	Qty.
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Matrix	Region	(8/24/2015)	(Cumulative)
Private Drinking Water Well Samples	9	0	0
Water Samples ( at 4 different depths)	9	12	48
Sediment Samples	9	3	12

## 2.2 Planning Section

### 2.2.1 Anticipated Activities

Sampling operations along the San Juan River with law enforcement escorts will continue today.

One START contractor is the only member that remains working out of the Lake Powell area. He will be working with a USGS/NPS crew on scene and has embarked on a 14 day trip to collect a more robust sample set.

Feed is expected to be delivered to various Navajo chapters during this operational period and continuing into the future.

#### 2.2.1.1 Planned Response Activities

Sampling will continue today with law enforcement escort. Alfalfa deliveries will continue this week to various chapters.

#### 2.2.1.2 Next Steps

### 2.2.2 Issues

On 17AUG15, at approximately 1130, seven members of the Farmington ICP response team were approached in the farmland area of Shiprock by a member of the Navajo Nation. The individual is in opposition to the response operations of Farmington ICP in regards to water and feed deliveries in the Shiprock Chapter. During the confrontation, the response personnel were threatened by being told their vehicles "would be stoned". They were also intimidated by a second vehicle that showed up in support of the individual. The response personnel listened to what the individual had to say and eventually left.

At approximately 1215, another incident occurred with the same individual at the bridge in Shiprock. There, the individual argued with 2 EPA employees and threatened to break their equipment. The individual left after a few minutes. In both cases the response personnel returned to the Farmington ICP and were unharmed.

An investigation is being conducted by the Navajo Department of Criminal Investigation.

On 19AUG15, a video was posted on social media that showed Navajo Nation President and Attorney General alleging contamination in one of the water tanks delivered by the EPA.

## 2.3 Logistics Section

Requests from Navajo Nation for agriculture and livestock water and feed will be submitted to the Window Rock EOC via a ICS-213RR. Once signed, the request will be forwarded to the Farmington ICP where it will be processed.

## 2.4 Finance Section

### 2.4.1 Narrative

Region	U.S. EPA Cumulative Expended Payroll	U.S. EPA Cumulative Expended Travel	U.S. EPA Cumulative Other Charges	Cumulative U.S. EPA Contractors Cost	Total Cumulative Costs	Estimated Daily Burn Rate
9				\$821,000 (estimated)	\$857,000(estimated)	\$54,000 (estimated)

## 2.5 Other Command Staff

### 2.5.1 Safety Officer

With weather being forecasted into the 90s, hydration is of paramount importance. Additionally, much of the terrain surrounding the river is uneven and rocky. Responders should transit these areas with care.

While transiting throughout the region, responders should be mindful of the potential for contact with wildlife. Scorpions, snakes, and other similar animals raise a potential for injury.

### 2.5.2 Liaison Officer

Liaison officers are continuing outreach with Navajo community members and representatives of the Navajo Tribe.

### 2.5.3. Weather Forecast

Weather forecast for Tuesday, August 25

#### FARMINGTON AREA

##### *Today*

A mix of sun and clouds with a high of 92, low of 63 and 20% chance of precipitation. Wind coming out of the east at 15 miles per hour.

##### *Tonight*

No precipitation tonight. Partly cloudy, with a low around 63.

##### *Tomorrow*

Sunny with a high of 80, low of 57. 50% chance of precipitation.

## 3. Participating Entities

### 3.1 Area Command

EPA Region 9 is coordinating with EPA Regions 6 and 8, Navajo Nation, and the states of Colorado, New Mexico, Utah, and Arizona. The EPA Region 9 is working with the Navajo Nation to evaluate possible impacts to the Tribe. Potentially impacted water systems have been notified, and precautions are in place to ensure drinking water is protected. The EPA and New Mexico Environmental Department are providing assistance to community water systems and closely monitoring the situation. EPA Region 9 has contacted the Bureau of Indian Affairs regarding potential impacts to the Navajo Nation and is currently working with Navajo liaisons.

### 3.2 Unified Command and Cooperating Agencies

The UC includes EPA Region 9 and United States Coast Guard. Don Zuroski will relieve Bret Moxley as Incident Commander tomorrow.

## 4. Personnel On Site

Region	Agency / Entity	Number of Personnel (8/24/2015)
	U.S. EPA Personnel	5
	U.S. EPA Contractors	16
	USCG	4
	Other Federal, State, Local and Tribal Entities - 3	

## 5. Definition of Terms

No information available at this time.

## 6. Additional sources of information

### 6.1 Internet location of additional information/report

[www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine)

## 7. Situational Reference Materials

No information available at this time.